

# Lossless Variable-bit Compression

## ABSTRACT OF THE DISCLOSURE

Apparatus and methods for compressing data points. The invention compresses the representation of a sequence of points in a space by, for example, dividing the sequence of points into segments of successive points and then compressing each of the segments irrespective

5 of the compression applied to the other segments. The dividing may include dividing the points sequence into segments of S successive points. The value of S may be the value of S generating the smallest of the multiple compressions. The compression may include compressing each of the segments of S successive, i-bit points into segments of j-bit points, where

10 j <= i, j may vary from segment to segment and, for any given segment, j is the minimum number of bits necessary to represent the data in that given segment.